REMARKS

In the Office Action claim 5 was rejected under 35 U.S.C. § 112 as not enabling one skilled in the art to make and/or use the invention. In particular, it was asserted that there was no support in the specification for generating a second tilt context and for selecting an orientation for an image using a first tilt context instead of the second tilt. Further, it was asserted that there was no teaching of having a second context being generated if the period of time is shorter than a set period. Applicants respectfully dispute these assertions.

Support for claim 5 is found on pages 25 and 26 of the specification. On page 25, it is indicated that recent display orientations are stored in a First-In-First-Out (FIFO) buffer. The description does not put a limit on how long the display orientation must be maintained in order to be stored in the buffer. Thus, page 25 enables the storage of an recent display orientation in the buffer.

When a user puts down the device, the context information server "searches through FIFO 806 to find the most recent stable orientation. An orientation is considered stable if it was maintained for more than 1 or 2 seconds." This description indicates that FIFO 806 includes recent orientations that were not "stable orientations" because FIFO 806 must be searched for the most recent stable orientation. If all of the orientations in FIFO 806 were stable orientations, no search would be necessary. The last orientation could just be taken out of FIFO 806. However, the fact that the specification indicates that FIFO 806 is searched for the last stable orientation indicates that orientations that were not maintained for more than 1 or 2 seconds are also present in FIFO 806.

As such, the description on pages 25 and 26 support claim 5 and enable those skilled in the art to practice the invention.

In particular, the description shows that multiple tilt context values will be generated. That some will be stable and some will not and that a search for the most recent stable orientation is performed. This search indicates that another orientation that was not stable may occur after the most recent stable orientation. As such, claim 5 is enabled.

Claim 5

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lands (U.S. Patent 6,201,554) in view of Thomas (U.S. Patent 6,567,101).

In the Office Action, it was stated that Thomas shows a step of selecting an orientation for an image on a display when the flat context value indicates the device is laying flat by using a tilt context value that was maintained for longer than a set period of time before the flat context value is generated and before a different tilt context value is maintained for less than the set period of time. In particular, column 5, lines 6-11 were cited as showing these steps because they show that a calibrator may be automatically activated if a device is held in a particular orientation for more than a specified period of time. Applicants respectfully dispute this assertion.

The cited section of Thomas does not show the selection of an orientation for an image when a flat context value is generated. Instead, the cited section discusses a calibrator that is used to set a zero tilt angle for the device. This zero tilt angle is used as a reference point for determining how much the device has been tilted, which in turn is used to control scrolling of an image on the display. Thomas does not state that this calibrator is used to determine an orientation for an image when the device is laid flat.

In fact, it appears that Thomas continually changes the orientation of the image as the device is rotated about the z-

axis. As a result, even if the calibrator is activated for one position of the device, the orientation of the image will change if the device is rotated about the z-axis before it is laid flat. Thus, it is the final z-rotation of the device that determines the orientation of the image when the device is laid flat, regardless of how long that z-rotation was maintained.

This is substantially different from the present invention in which changes in the tilt context value that are not maintained for longer than the set period of time are not used to determine the orientation of an image when a flat context value is received. Instead, an earlier tilt context value that was maintained for longer than the set period of time is used to select the orientation for the image when the flat context value is received.

Note that none of the cited references address the problem solved by claim 5. That problem arises because as a device is placed on a flat surface, it generates a number of different tilt context values that can cause the orientation of the image to change arbitrarily. By requiring a tilt context value to be maintained for more than a set period of time, the present invention prevents the orientation from changing arbitrarily as the device is placed down on the surface. Thus, claim 5 allows the orientation of the display to switch based on a tilt angle while at the same time maintaining a stable orientation when the device is laid flat on a surface. None of the cited references show or suggest the need for this invention and none of the references show or suggest the solution provided by claim 5.

In the Advisory Action of August 27, 2004, the Examiner asserted that since there is no minimum period of time required for the second tilt context value, it could be any tilt value generated in moving from a first tilt context value to the flat position.

This assertion assumes that Thomas does not use the last context value it receives for setting the orientation of the

image. However, it appears that Thomas in fact continuously changes the orientation of the image as the device is rotated about the axis. (see Col. 6, Lines 55-65 where the display of data "remains oriented with respect to a point of reference.") As a result, in moving from one tilt position to another tilt position before laying the device flat, Thomas always uses the last tilt position to determine the orientation of the displayed image. This is substantially different from the present invention in which the last tilt position is not used if it was not maintained for more than a set period of time. Instead, an earlier tilt position that was maintained for more than a set period of time is used.

Since neither Lands nor Thomas show or suggest selecting an orientation based on a tilt context value that is maintained for more than a set period of time instead of a later tilt context value that is maintained for less than the set period of time, their combination does not show or suggest the invention of claim 5.

Claim 9

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lands in view of Norden (WO 98/14863).

Claim 9 provides a method in which at least one sensor signal is generated using at least one sensor in a device. A tilt context value is also generated that indicates how the device is tilted based on at least one sensor signal. The orientation of an image on the display is changed based on the tilt context value unless the tilt context value is being used to control scrolling of an image on the display. The same tilt context value can change the orientation and control scrolling.

In rejecting claim 9, the Office Action indicated that Lands shows that "the tilting of the display device is affecting image by changing the paging, volume, brightness, or zoom modes." Further, the Office Action stated that Norden shows a hand-held

image display device "wherein by tilting the device, the image orientation can be changed from up-down (scrolling) or right-left based on sensing the tilting of the device."

Applicants first note that Norden does not use tilting of a device to change the orientation of a displayed image. Norden only discusses scrolling. The scrolling can be up-down or left-right. However, Norden never changes the orientation of an image based on tilting of the device. Similarly, Lands does not discuss changing the orientation of an image based on the orientation of the device. Because of this, the combination of Lands and Norden does not show a step of changing the orientation of an image on a display based on a tilt context value as required by claim 9.

Further, neither Norden nor Lands shows or suggest that a tilt context value should not be used to change the orientation of an image if it is currently being used to control scrolling of an image on the display as found in claim 9.

In addition, neither Lands nor Norden show or suggest the problem solved by claim 9. The invention of claim 9 prevents the display orientation from switching during scrolling while allowing the orientation to switch if the display is not scrolling. This is done under the present invention because changing the orientation can cause a delay in the redrawing of the display. Such a delay is undesirable during scrolling. By preventing orientation redraws, the present invention provides a more stable appearance to the user interface during scrolling while allowing the orientation to be switched based on tilting when the scrolling is not activated. Neither Lands nor Norden discuss the problem of delayed redraws or the desirability of suspending orientation switching during scrolling.

Since neither Lands nor Norden show or suggest that an orientation should be changed based on a tilt context value unless the tilt context value is being used for scrolling, and neither references shows or suggests the desirability of such behavior in

a device, the combination of Lands and Norden does not show or suggest the invention of claim 9.

Claim 10

Claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lands in view Thomas and in view of Watanabe (Japanese Patent Publication Number 6-292826).

Under claim 10, a method in a device having display includes generating at least one sensor signal using at least one sensor in the device. A holding context value and an orientation context value are generated based on the at least one sensor signal. The holding context value indicates that the user is holding the device and the orientation context value indicates that the device is in an orientation consistent with the user wanting to use the device. Based on the holding context value and the orientation context value, the device is placed in a full power mode.

None of the cited references show or suggest the invention of claim 10 because none of the cited references show or suggest using an orientation context value to control a power mode on a device.

In particular, Watanabe does not show or suggest using an orientation context value to control a power mode on a device. Under Watanabe, the desktop computer is placed in a normal power mode when the user touches a keyboard. Based only on the abstract, there is no mention of an orientation context value being used to control a power mode in Watanabe.

Similarly, Lands does not show or suggest controlling a power mode on the device based on an orientation context value. Instead, Lands only discusses volume control, brightness control, zooming and paging using orientation context values.

In addition, there is no suggestion in either Lands or Watanabe for combining the orientation context value of Lands with the power mode control of Watanabe. Without such a suggestion,

those skilled in the art would not be motivated to place the device in full power mode based on an orientation context value.

This lack of motivation is further supported by the fact that none of the cited references show or suggest the problem solved by claim 10. In particular, by using the orientation of the device to determine when to go into full power mode, the present invention makes it less likely that the device will go into full power mode when it is placed in a briefcase or purse, where it would come into contact with other objects, and thus be perceived as being handled. None of the cited references show or suggest that a device should be prevented from going into full power mode when it is placed in a briefcase or purse. As such, there is no motivation to add an orientation context value to the determination of when to place the device into full power mode. Note in particular, that there is no motivation to add such an orientation device to the desktop shown in Watanabe, since the orientation of the desktop computer in Watanabe is always the same and as a result the sensed orientation would never change and the device would never be brought into full power mode.

Since neither Lands nor Watanabe show or suggest using the orientation of a device to control the full power mode of the device, the combination of the cited references does not show or suggest the invention of claim 10.

Claim 12

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lands in view of Thomas and Watanabe.

Claim 12 is directed to a method in which at least one sensor signal is generated that indicates the distance to an object without requiring the object to touch the device. Based on this sensor signal, a sequence of proximity context values is generated. The sequence of proximity context values indicates the movement of an object relative to the device. Under the method, the device is prevented from entering an idle mode when the

sequence of proximity context values indicates that an object is moving relative to the device while allowing the object to enter an idle mode when the sequence of proximity context values indicate that an object is present but not moving relative to the device.

Claim 12 is not shown or suggested by the combination of cited references. In particular, none of the references show or suggest that a device should be prevented from entering idle mode when movement is detected using a sensor that indicates the distance to an object without requiring the object to touch the device. Further, none of the cited references allow the device to enter idle mode when a proximity context value indicates that an object is present but not moving. Since none of the cited references show or suggest the invention of claim 12, claim 12 is patentable over the cited references.

Claim 14

Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lands in view of Watanabe and Thomas.

Claim 14 is directed to a method in which at least one sensor signal is used to generate a holding context value that indicates that a user is holding the device. An orientation context value is also generated that indicates that the device is in an orientation consistent with the user wanting to use the device. Based on the holding context value and the orientation context value, a sound capturing application is activated.

None of the cited references show or suggest initiating a sound capturing application based upon a holding context value and an orientation context value. Since none of the cited references show or suggest activating a sound capturing application based on a holding context value and an orientation context value, claim 14 is patentably distinct from the combination of cited references.

Claims 31-33

Claims 31-33 were rejected under 35 U.S.C. § 103(a) as

being unpatentable over Thomas.

Claim 31 is directed to a method in which an indication that a user of a device wants to scroll an image on the device is received. Based on this indication, at least one toolbar that was shown on the display before receiving the indication is removed from the display. The image is then scrolled.

In the Office Action, it was asserted that since Thomas does not show any toolbar in his display, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to realize from Thomas that the device does not include a toolbar because the commands are carried out based upon the orientation of the device and that would increase the size of the display area. Applicants respectfully dispute this assertion.

First, the lack of a toolbar in the Thomas drawings does not suggest that toolbars should be removed from a display. In Thomas, no attempt was made to show actual images in the displays. Instead, Thomas represents the contents of the display with the simple word "Text". This does not mean that Thomas would only show text on the display. In fact, Thomas indicates that the display may show "text, graphics or the like" at column 3, line 65. Since a toolbar is a graphic, it would appear that Thomas would allow toolbars to be shown on the display.

Second, Thomas makes no suggestion that a toolbar should be removed from a display based on an indication that a user wishes to scroll an image. In addition, Thomas does not indicate that there would be any benefit to removing the toolbars before scrolling. As such, Thomas does not provide any teaching or suggestion for removing toolbars from a display before performing scrolling. As such, Thomas does not show or suggest the invention of claims 31-33.

Conclusion

Based on the above remarks, claims 5, 9, 10, 12, 14 and 31-33 are patentable over the cited art. Reconsideration and

allowance of the claims is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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